

Date: Sun, 10 Apr 94 04:30:09 PDT  
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>  
Errors-To: Ham-Ant-Errors@UCSD.Edu  
Reply-To: Ham-Ant@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Ant Digest V94 #98  
To: Ham-Ant

Ham-Ant Digest                      Sun, 10 Apr 94                      Volume 94 : Issue    98

Today's Topics:

                    10M 5/8 wave antenna  
            Antenna materials... (2 msgs)  
                    Coax Loss on HF  
                    Egg beater?  
            Help for low cost antenna  
                    HF antenna help  
                    HF in an apartment  
                    Isolooop Experiences?  
                    Ladder Line (3 msgs)  
                    Low cost antenna for Tv  
            low cost antenna required  
            Rugged Repeater Antennas, Advice Needed  
                    Temporary HF Mobile ant?

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>  
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Sat, 9 Apr 1994 22:32:52 GMT  
From: news.Hawaii.Edu!uhunix3.uhcc.Hawaii.Edu!jherman@ames.arpa  
Subject: 10M 5/8 wave antenna  
To: ham-ant@ucsd.edu

I'm constructing a 10M beacon for Hawaii. I believe the ideal antenna  
would be a 5/8 wave vertical since it has a lower angle of radiation  
which provides it a bit of gain over a dipole.

Questions:

- Should the radiating element be exactly 5/8 the transmitting wavelength?

- This antenna does not terminate in 50 ohms; what's the 'ideal' matching inductor/capacitor design at the base? (airwound? wire size? # of turns? diameter?) [Oh, the xmtr has an output of about 10W]
- Has QST done an article on a 5/8 wave for 10M?

Thanks so much for your help.

Jeff NH6IL

P.S. Here's a list of 10M beacons (not too up-to-date, though). I pulled this off of the email server at ham-server@grafex.sbay.org

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From: ham-server@GRAFex.sbay.org  
Subject: File K:/hamradio/10mbeaco.lst

The following 10 meter beacon list has been compiled and maintained by Joe Gumino (K20LG). If you have any corrections, additions or deletions please direct them to me (WA2ZYU @ KB1BD-4) and I will forward them to Joe. Thank you for your interest and response to this list in the past. Joe and I shall work to keep it current.....agn  
tnx & 73.

10 METER BEACON'S de K20LG                      2/19/90                      Part 1

Edited and distributed under OKIPN by N8GTC

FREQ.	CALL	OPERATION	LOCATION	NOTES
28.175	VE3TEN	C	OTTAWA, CANADA	10W, GP
28.191	VE6YF		EDMONTON, ALBERTA	10W
28.195	IY4M	ROBOT	BOLOGNA, ITALY	20W, 5/8 GP
28.200	GB3SX	C	CROWBOROUGH, ENGLAND	8W, DIPOLE
28.201	LU8ED		ARGENTINA	5W
28.202	KE5GY		ARLINGTON, TX	5W, VERTICAL
28.2025	ZS5VHF		NATAL, RSA	5W, GP
28.204	DL0IGI	C	W. GERMANY	100W, VERT. DIPOLE
28.205	KA3OEM		MEADVILLE, PA.	27W, YAGI/WEST
28.206	KJ4X		PICKENS, SC	2W, VERTICAL
28.2075	W8FKL	C	VENICE, FLA	10W, VERT.
28.208	WA1IOB	C	MARLBORO, MASS	75W, VERT.
28.209	NX20	C	STATEN ISLAND, NY	10W, GP
28.210	3B8MS	C	MAURITIUS	GP
28.210	K4KMZ	I	ELIZABETHTOWN, KY.	20W, VERT.
28.210	KC4DPC	C	WILMINGTON, NC	4W, DIPOLE
28.212	EA6RCM		PALMA DE MALLORCA	4W, 5 EL NNE
28.2125	ZD9GI	C	GOUGH IS.	GP
28.215	GB3RAL	C	SLOUGH, BERKSHIRE	20W, GP

28.2175	W8UR		MACKINAW ISLAND, MI	.5W, GP
28.2175	WB9VMY	C	CALUMET, OK.	2W, DIPOLE
28.2195	LU4XS		CAPE HORN	
28.220	5B4CY	C	CYPRUS	26W, GP
28.221	PY2G0B		SAN PAULO, BRAZIL	15W, VERT.
28.222	W9UX0	C	NR CHICAGO, ILL.	10W, GP
28.2225	HG2BHA	C	TAPOLCA, HUNGARY	10W, GP
*28.225	PY2AMI	C	SAO PAULO, BRAZIL	5W, DIPOLE
28.2275	EA6AU	C	MALLORCA, BALEARIC IS.	10W, 5/8 GP
28.230	ZL2MHF	C	MT. CLIMIE, NZ.	50W, VERT. DIPOLE
28.232	W7JPI/AZ	C	SONOITA, ARIZ.	5W, 3 EL YAGI NE
28.233	KD4EC	C	JUPITER, FLA.	7W, GP
28.235	VP9BA	C	HAMILTON, BERMUDA	10W, GP
28.2375	LA5TEN	C	OSLO, NORWAY	10W, 5/8 GP
28.2405	5Z4ERR	C	KIAMBURU, KENYA	
28.245	A92C		BAHRAIN	NW/SE DIPOLE
28.2455	ZS1CTB	C	CAPETOWN, RSA	20W, 1/4 VERT.
28.247	EA3JA		BARCELONA, SPAIN	
28.2475	EA2HB	I	SPAIN	6W, GP
28.248	K1BZ	C	BELAST, MAINE	5W, VERT. DIPOLE
28.250	W3SV	C	ELVERSON, PA	10W, VERT.
28.250	K0HTF	C	DES MOINES, IA	2W, GP
28.250	Z21ANB	C	BULAWAYO, ZIMBABWE	15W, GP
28.2505	4N3ZHK	C	MT. KUM, YUGOSLAVIA	1W, VERT.
28.252	WJ7X	C	SEATTLE, WA	5W, RINGO
28.252	WB4JHS	I	FLORISSANT, MO.	7W, VERT.
28.2525	OH2TEN		FINLAND	
28.255	LU1UG		GRAL PICO, ARGENTINA	5W, GP
28.2575	DK0TEN	C	ARBEITSGEN, W. GERMANY	40W, GP
28.259	WB9FVR	C	PEMBROKE PINES, FLA.	1W, DIPOLE
28.260	VK5WI	C	ADELAIDE, SA, AUSTRALIA	10W, GP
28.262	VK2RSY	C	SYDNEY, NSW, AUSTRALIA	25W, GP
28.264	VK6RWA	C	PERTH, WA, AUSTRALIA	
28.266	VK6RTW	C	ALBANY, WA, AUSTRALIA	
28.266	KB4UPI	C	BIRMINGTON, ALA	20W, 1/4 VERT.
28.2685	W9KFO	I	EATON, ILL	750MW, VERT.
28.270	ZS6PW	C	PRETORIA, RSA	10W, 3 EL YAGI
28.270	VK4RTL	C	TOWNSVILLE, QLD, AUSTRALIA	
28.2725	9L1FTN	I	FREETOWN, SIERRA LEONE	10W, VERT. DIPOLE
*28.2745	ZS1LA		STILLBAY, RSA	20W, 3 EL YAGI NW
28.275	AL7GQ	C	DENVER, CO	1W, LOOP
28.2755	N6RDX	I	STOCKTON, CA	20W, 3 EL YAGI
28.2775	DF0AAB	C	KIEL, W. GERMANY	10W, GP
28.280	LU8EB		ARGENTINA	5W
28.282	VE1MUF	C	FREDRICKTON, NB, CANADA	500MW, DIPOLE
28.282	VE2HOT	C	BEACONSFIELD, QUE	5W, VERT DIPOLE
28.2825	OK0EG	C	HRADEC KRALOVE	10W, DIPOLE
28.284	VP8ADE	C	ADELAIDE IS, NR ANTARCTICA	8W, V BEAM TO G LAND

*28.286	KE2DI		NR ROCHESTER, NY	2W, VERT. DIPOLE
28.286	KK4M	C	LAS VEGAS, NEV.	5W, VERT.
28.287	W80MV		NR ASHVILLE, NC.	5W, GP
28.287	H44SI	C	SOLOMON IS.	15W
28.288	W2NZH	I	MOORESTOWN, NJ	3W, GP
28.290	SK5TEN		SWEDEN	
28.290	VS6TEN	C	HONG KONG	10W, VERT.
28.292	ZD8HF		ASCENSION ISLAND	
28.2925	LU2FFV		SAN JORGE, ARGENTINA	5W, GP
28.295	WC8E	I	CINCINNATI, OHIO	10W, RINGO
28.296	W3VD	C	LAUREL, MARYLAND	1.5W, VERT. DIPOLE
28.297	WA4DJS	I	FT. LAUDERDALE, FLA	30W, GP
28.301	KF4MS	C	ST. PETERSBURG, FLA	5W
28.3025	PT7AAC		FORTALEZA, BRAZIL	5W, GP
28.306	PT8AA		RIO BRANCO, BRAZIL	5W, GP
28.315	ZS6DN	C	IRENE, RSA	100W, VERT.
28.888	W6IRT		HOLLYWOOD, CA	5W, GP CODE PRACTICE
28.992	DF0ANN		MOTITZBERG, W. GERMANY	20MW, 1 EL DELTA LOG

\* REVISION

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 -- This is the last part -----  
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End of session.

A new INDEX is placed on-line weekly. Files are constantly being added.

We are constantly on the lookout for new amateur radio related material.  
 If you have something you would like to share, contact me.

73 de KA6ETB@grafex.sbay.org . . . . . KA6ETB @ N0ARY.CA

-----  
 Date: 9 Apr 94 18:51:37 GMT  
 From: sdd.hp.com!hpscit.sc.hp.com!icon!greg@hplabs.hp.com  
 Subject: Antenna materials...  
 To: ham-ant@ucsd.edu

Bill Plymale (plymale@mousetrap.es.vt.edu) wrote:  
 : Any thoughts or concerns associated with constructing an  
 : antenna using dissimilar materials? For instance, a beam  
 : consisting of a copper boom and aluminum elements.  
 : "Half-inch" copper tubing is readily available, half-inch  
 : aluminum tubing is not.

You will probably have corrosion problems if the two dissimilar metals contact each other. Note that antenna dimensions change if the elements are isolated or not. The ARRL Antenna Handbook lists dimensions for both.

Greg KD6KGW

-----  
Date: 9 Apr 1994 11:55:42 GMT  
From: ihnp4.ucsd.edu!swrinde!emory!news-feed-2.peachnet.edu!insosf1.infonet.net!  
solaris.cc.vt.edu!mousetrap.es.vt.edu!plymale@network.ucsd.edu  
Subject: Antenna materials...  
To: ham-ant@ucsd.edu

Any thoughts or concerns associated with constructing an antenna using dissimilar materials? For instance, a beam consisting of a copper boom and aluminum elements. "Half-inch" copper tubing is readily available, half-inch aluminum tubing is not.

Thanks ... Bill (KD4CIY)

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Bill Plymale     plymale@mousetrap.es.vt.edu     703-231-9530  
Virginia Tech - Information Systems

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Date: Sun, 10 Apr 1994 01:59:32 GMT  
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!  
gbrent@network.ucsd.edu  
Subject: Coax Loss on HF  
To: ham-ant@ucsd.edu

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Date: Sun, 3 Apr 1994 17:17:53 GMT  
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!darwin.sura.net!  
news.Vanderbilt.Edu!news@network.ucsd.edu  
Subject: Egg beater?  
To: ham-ant@ucsd.edu

Jeff,

Eggbeaters are antennae made by M\*\*2 engineering which are more or less omnidirectional no matter how you look at them. They strongly resemble half of an old mixer, such as was used in baking and scrambling eggs. I personally have not used them, but most of the reports I have

seen from people using them for amateur satellite work are that for that application they work, but not well enough to recommend.

Alan

Recommended  
four  
line  
signature.

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Date: Sat, 9 Apr 1994 06:52:24 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!ee.und.ac.za!csir.co.za!  
hippo.ru.ac.za!caesar.wits.ac.za!dlab164.ee.wits.ac.za!budhia@network.ucsd.edu  
Subject: Help for low cost antenna  
To: ham-ant@ucsd.edu

I require some info on designing a low cost antenna to rural communities where signal levels are fairly low. Thus a low cost outdoor antenna is required.

Any help on design procedures or even examples of existing antennas would be appreciated.

Thanks

Harshik <budhia@underdog.ee.wits.ac.za>

-----  
Date: 9 Apr 1994 05:36:35 GMT  
From: ihnp4.ucsd.edu!usc!cs.utexas.edu!chpc.utexas.edu!news.utdallas.edu!corpgate!  
bnrgate!bnr.co.uk!uknet!demon!news2.sprintlink.net!news.sprintlink.net!  
indirect.com!kg7bk@network.ucsd.edu  
Subject: HF antenna help  
To: ham-ant@ucsd.edu

Chuck Hawley (hawley@aries.scs.uiuc.edu) wrote:  
: HarrisR@yvox.byu.edu (Richard Harris) writes:

: Put up a 100 or so foot dipole as high as you can get it, and feed it with  
: 450 ohm ladder line. Run it through a 2KW tuner to a 100 Watt transceiver.  
: 73, Chuck Hawley, KE9UW, Urbana, IL  
: >Richard Harris

Hi Richard and Chuck,

I agree 100% and there are some little known facts that accompany this non-resonant, center-fed, dipole, Zepp, G5RV, whatchamacallit. A center-fed dipole is resonant at any number of frequencies. The name, non-resonant, means that it is not resonant on an AMATEUR band. It is a half-wave at some frequency and therefore, resonant at that frequency (and any multiple of that frequency). A 102 ft. antenna is a half-wave around 4.6 MHz. An 88 ft. (my antenna) is a half-wave around 5.3 MHz. At about three times the half-wave frequency, the radiation pattern from these antennas changes from a two-lobe broadside pattern to a four-lobe clover-leaf pattern with very little broadside radiation. Don't expect your 102 ft. G5RV to radiate broadside on 17m. (Some would say, don't expect your G5RV to radiate at all on 30m and 15m).

The frequency at which a 102 ft center-fed antenna changes from two lobes to four lobes is 20m. One will see both the two side lobes and the four cloverleaf lobes for a total of six lobes on 20m because three times 4.6 equals 13.8. I chose 88 ft for my antenna because it has the two side lobes on 20m to cover Australia and South Africa and has the four cloverleaf lobes on 17m to cover Asia, New Zealand, Central/South America, and Europe. In Arizona, I had to orient it N10W to aim the four lobes in the proper directions. If one doesn't orient the antenna properly, most of the RF can be radiated over the oceans instead of over land.

And please don't contribute to global warming by feeding this kind of antenna with coax. Use near-lossless ladder-line. Mother Nature will thank you.

73, Cecil, kg7bk@indirect.com

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Date: Sun, 10 Apr 1994 08:00:01 GMT  
From: agate!library.ucla.edu!csulb.edu!csus.edu!netcom.com!potaczek@ames.arpa  
Subject: HF in an apartment  
To: ham-ant@ucsd.edu

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Date: 8 Apr 1994 12:15:06 -0400  
From: ihnp4.ucsd.edu!galaxy.ucr.edu!library.ucla.edu!europa.eng.gtefsd.com!gatech!news.ans.net!hp81.prod.aol.net!search01.news.aol.com!not-for-mail@network.ucsd.edu  
Subject: Isoloop Experiences?  
To: ham-ant@ucsd.edu

In article <2o0sp8\$r4j@wrdis02.robins.af.mil>, lakeith@robins.af.mil  
(CONTRACTOR Larry Keith;653 CCSG/SCT) writes:

>>real world experiences

I've had mine up for almost two years (8 feet above chimney cap on two-story house), and worked 230 countries with it (215 confirmed), won certificates for both an ARRL and CQ WW DX contest (15m CW, low power, sixth call area), worked 39 zones in 6 months (and will probably die never working zone 34), and generally have a good time with it. The constant re-tuning is a pain, and the automatic tuner didn't work for me. Until I can overturn the XYL zoning restriction at this QTH, it will have to do.

Danny AE9F/6

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Date: 9 Apr 1994 00:18:46 -0400  
From: ihnp4.ucsd.edu!usc!sol.ctr.columbia.edu!news.mtu.edu!news.mtu.edu!not-for-mail@network.ucsd.edu  
Subject: Ladder Line  
To: ham-ant@ucsd.edu

Where does one aquire 450ohm transmission quality ladderline? I have seen in included in those over priced dipole kits, but I haven't found it anywhere sold sepperatly. Is there a suitable substitute? Has anyone tried the stuff for roof mounted TV antennas? Will that type of ladder line work?

I have heard many people talk about making their own ladder line. Can anyone offer some suggestions on how to make your own ladder line?

Thanks

Chris ==- N8PBI

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Date: 9 Apr 1994 05:28:07 GMT  
From: usc!howland.reston.ans.net!cs.utexas.edu!chpc.utexas.edu!news.utdallas.edu!corpgate!bnrgate!bnr.co.uk!uknet!demon!news2.sprintlink.net!news.sprintlink.net!indirect.com!kg7bk@ihnp4.ucsd.edu  
Subject: Ladder Line  
To: ham-ant@ucsd.edu

Christopher D. Sorensen (cdsorens@mtu.edu) wrote:  
: Where does one aquire 450ohm transmission quality ladderline? I have seen in  
: Chris ==- N8PBI



Hi Chris, don't bother building ladder-line unless you have time to kill.  
It's about \$15 per 100 ft from Antennas West, 1-800-926-7373

73, Cecil, kg7bk@indirect.com

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Date: Sat, 09 Apr 94 20:54:37 PDT  
From: ihnp4.ucsd.edu!swrinde!emory!sol.ctr.columbia.edu!newsxfer.itd.umich.edu!  
nntp.cs.ubc.ca!mala.bc.ca!oneb!ham!emd@network.ucsd.edu  
Subject: Ladder Line  
To: ham-ant@ucsd.edu

cdsorens@mtu.edu (Christopher D. Sorensen) writes:

> Where does one acquire 450ohm transmission quality ladderline? I have seen in  
> included in those over priced dipole kits, but I haven't found it anywhere so  
> sepperatly. Is there a suitable substitute? Has anyone tried the stuff for  
> roof mounted TV antennas? Will that type of ladder line work?  
>  
> I have heard many people talk about making their own ladder line. Can anyone  
> offer some suggestions on how to make your own ladder line?  
>  
> Thanks  
>  
> Chris -- N8PBI  
>

Try calling Amateur Radio Supply in Seattle at 1-800-457-2277. I've seen  
some there, and they ship to the US, Canada and Puerto Rico.

73, Bob.

Robert Smits	There is *no* idiotproof filter.
VE7EMD	Idiots are proof against anything!
Ladysmith B.C.	- Richard Chycoski, VE7CVS
e-mail: emd@ham.almanac.bc.ca	

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Date: Sat, 9 Apr 1994 06:42:56 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!ee.und.ac.za!csir.co.za!  
hippo.ru.ac.za!caesar.wits.ac.za!dlab164.ee.wits.ac.za!budhia@network.ucsd.edu  
Subject: Low cost antenna for Tv  
To: ham-ant@ucsd.edu

I require some info on designing a low cost antenna to rural communities

where signal levels are fairly low. Thus a low cost outdoor antenna is required.

Any help on design procedures or even examples of existing antennas would be appreciated.

Thanks

Harshik <budhia@underdog.ee.wits.ac.za>

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Date: Sat, 9 Apr 1994 06:56:37 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!ee.und.ac.za!csir.co.za!  
hippo.ru.ac.za!caesar.wits.ac.za!dlab164.ee.wits.ac.za!budhia@network.ucsd.edu  
Subject: low cost antenna required  
To: ham-ant@ucsd.edu

I require some info on designing a low cost antenna to rural communities where signal levels are fairly low. Thus a low cost outdoor antenna is required.

Any help on design procedures or even examples of existing antennas would be appreciated.

Thanks

Harshik <budhia@underdog.ee.wits.ac.za>

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Date: Sat, 09 Apr 1994 12:53:12 -0500  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!cs.utexas.edu!swrinde!  
elroy.jpl.nasa.gov!ncar!hsdndev!NewsWatcher!user@network.ucsd.edu  
Subject: Rugged Repeater Antennas, Advice Needed  
To: ham-ant@ucsd.edu

I run two repeaters atop an isolated 2000 ft mountain in central VT where the weather can be cruel on antennas. Over the past 5-6 years both 146.97 & 224.68 Sinclair Stationmasters (top mounted side by side 10 ft apart on a Tee) developed leaks in their protective coverings, presumably due to UV radiation and wind, and must be replaced. I would very much appreciate other's experiences with the quality, durability, SWR, radiation patterns, and gain of other high quality stationmaster-like antennas before I expend lots of money to replace the old antennas. Please e-mail responses to duffyr address below.

Frank K1MOQ (K1MOQ/R Tunbridge,VT, Orange County VT ARS)

--

Frank H. Duffy, MD	e-mail: duffyfr@a1.tch.harvard.edu
Neurology, Childrens Hospital	workstation: fhd@fhd486.harvard.edu
& Harvard Medical School	FAX: (617) 735-7230
300 Longwood Avenue	voice: (617) 735-7919 / 7846
Boston, MA 02115 USA	amateur radio: K1MOQ

-----  
Date: 9 Apr 1994 22:01:10 -0400  
From: ihnp4.ucsd.edu!usc!sol.ctr.columbia.edu!news.mtu.edu!news.mtu.edu!not-for-mail@network.ucsd.edu  
Subject: Temporary HF Mobile ant?  
To: ham-ant@ucsd.edu

Can anyone give some suggestions for a temporary mobile HF antenna. I will be borrowing a car from the company I work for to use on my trip to Dayton and would like to work HF on the way down. I have never worked HF mobile because I didn't have a suitable rig untill now. I have an FT890 with the automatic tuner.

Can anyone reccomend a decent antenna for probably 40meters? or whatever band is best for HF mobile. The installation must be temporary and not do any damage to the car. (Ie: No big scratches)... I will probably be picking up a good HF mobile antenna at Dayton for my personal vehical but would sure like to get something on the air for the trip down.

Any suggestions would be greatly appreciated!

73, Chris -- N8PBI

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End of Ham-Ant Digest V94 #98  
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